



Form PTO-1449

U.S. Department of Commerce
Patent and Trademark Office

Atty. Docket No.
59331-E
/JPW/MAF/AJD

Serial No.
10/780,993

INFORMATION DISCLOSURE CITATION
(Use several sheets if necessary)

Applicant(s)
James M. Binley et al.

Filing Date
February 18, 2004

Group Art Unit

U.S. PATENT DOCUMENTS

Examiner Initials	Exh. No.	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
		5 8 8 6 1 6 3	03/23/99	Binley et al.			
		5 9 3 5 5 7 9	08/10/99	Habeshaw et al.			
	1	Allowed claims in U.S. Serial No. 09/602,864		Binley et al.			06/23/00

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Atwell, S. et al. (1997) Stable Heterodimers from Remodeling the Domain Interface of a Homodimer using a Phage Display Library, J. Mol. Biol. 270: 26-35;
	Barouch, D.H. and N.L. Letvin (2000) DNA Vaccination for HIV-1 and SIV, Interviro. 4: 282-287;
	Barouch, D.H. et al. (2002) Eventual AIDS Vaccine Failure in a Rhesus Monkey by Viral Escape from Cytotoxic T Lymphocytes, Nature 415: 335-339;
	Binley, J. et al. (2000) A Recombinant Human Immunodeficiency Virus Type 1 Envelope Glycoprotein Complex Stabilized by an Intermolecular Disulfide Bond Between the GP 120 and GP 41 Subunits is an Antigenic Mimic of the Trimeric Viron-Associated Structure, J. Virol. 74: 627-643;
	Burton, D.R. et al. (1994) Efficient Neutralization of Primary Isolates of HIV-1 by a Recombinant Human Monoclonal Antibody. Science 266: 1024-1027;
	Burton, D.R. and J.P. Moore (1998) Why do we Not Have an HIV Vaccine and how Can we Make One? Nature Med. Vaccine Suppl. 4(5): 495-498;
	Cao, J. et al. (1997) Replication and Neutralization of Human Immunodeficiency Virus Type 1 Lacking the V1 and V2 Variable Loops of the gp120 Envelope Glycoprotein, J. Virol. 71: 9808-9812;

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449		U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. 59331-E /JPW/MAF/AJD	Serial No. 10/780,993		
INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)				Applicant(s) James M. Binley et al.			
				Filing Date February 18, 2004	Group Art Unit		
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
		Edinger, A.L. et al. (1999) Functional Dissection of CCR5 Coreceptor Function through the Use of CD4-Independent Simian Immunodeficiency Virus Strains, J. Virol. 73: 4062-4073;					
		Farzan, M. et al. (1998) Stabilization of Human Immunodeficiency Virus Type 1 Envelope Glycoprotein Trimers by Disulfide Bonds Introduced into the GP 41 Glycoprotein Ectodomain, J. Virol. 72: 7620-7625;					
		Fouts, T.R. et al. (1998) Interactions of Polyclonal and Monoclonal Anti-Glycoprotein 120 Antibodies with Oligomeric Glycoprotein 120-Glycoprotein 41 Complexes of a Primary HIV Type 1 Isolate: Relationship to Neutralization, AIDS Res. Human Retrovir. 14: 591-597;					
		Fouts, T.R. et al. (1997) Neutralization of the Human Immunodeficiency Virus Type 1 Primary Isolate JR-FL by Human Monoclonal Antibodies Correlates with Antibody Binding to the Oligomeric Form of the Envelope glycoprotein Complex, J. Virol. 71: 2779-2785;					
		Gallaher, W.R. et al. (1995) A General Model for the Surface Glycoproteins of HIV and Other Retroviruses, AIDS Res. Human Retrovir. 11: 191-202;					
		Haynes, B.F. (1996) HIV Vaccines: Where are we and Where are we Going? Lancet 348: 933-937;					
		Helseth, E. et al. (1991) Human Immunodeficiency Virus Type 1 gp120 envelope Glycoprotein Regions Important for Association with the gp41 Transmembrane Glycoprotein, J. Virol. 65(4): 2119-2123;					
		Johnston, M.I. and J. Flores (2001) Progress in HIV Vaccine Development, Curr. Opin. Pharmacol. 1(5): 504-510;					
		Joy, A.K. et al. (1999) Can HIV Infection be Prevented with a Vaccine? Drugs R&D 6: 431-440;					
		Labranche, C.C. et al. (1994) Biological, Molecular, and Structural Analysis of a Cytopathic Variant from a Molecularly Cloned Simian Immunodeficiency Virus. J. Virol. 68: 5509-5522;					
		Labranche, C.C. et al. (1994) Biological, Molecular, and Structural Analysis of a Cytopathic Variant from a Molecularly Cloned Simian Immunodeficiency Virus. J. Virol. 68: 7665-7667;					
		Maerz, A.L. et al. (2001) Functional Analysis of the Disulfide-Bonded Loop/Chain Reversal Region of Human Immunodeficiency Virus Type 1 gp41 reveals a Critical Role in gp120-gp41 Association, J. Virol. 75(14): 6635-6644;					
		McInerney, T.L. et al. (1998) Mutation-Directed Chemical Cross-Linking of Human Immunodeficiency Virus Type 1 gp41 Oligomers, J. Virol. 72: 1523-1533;					
		Mitchell, W.M. et al. (1998) Inactivation of a Common Epitope Responsible for the Induction of Antibody-Dependent Enhancement of HIV, AIDS 12: 147-156;					
EXAMINER			DATE CONSIDERED				
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Form PTO-1449		U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. 59331-E /JPW/MAF/AJD	Serial No. 10/780,993
INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)				Applicant(s) James M. Binley et al.	
				Filing Date February 18, 2004	Group Art Unit
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)					
		Moore, J.P. et al. (1994a) "Probing the Structure of the Human Immunodeficiency Virus Surface Glycoprotein gp120 with a Panel of Monoclonal Antibodies, J. Virol. 68: 469-484;			
		Moore, J.P. et al. (1994b) Immunological Evidence for Interactions between the First, Second, and Fifth Conserved Domains to the gp120 Surface Glycoprotein of Human Immunodeficiency Virus Type 1, J. Virol. 68(11): 6836-6847;			
		Murphy, F.A. (1996) "Virus Taxonomy," in Fields Virology, Third Edition, B.N. Fields, et al. eds., Lippincott-Raven Publisher, Philadelphia, pp. 40 and 41;			
		Parren, P.W. et al. (1997) HIV-1 Antibody - Debris or Virion? Nat. Med. 3: 366-367;			
		Parren, P.W. et al. (1998) Neutralization of Human Immunodeficiency Virus Type 1 by Antibody to gp120 is Determined Primarily by Occupancy of Sites on the Virion Irrespective of Epitope Specificity, J. Virol. 72: 3512-3519;			
		Reitter, J.N. et al. (1998) A Role for Carbohydrates in Immune Evasion in AIDS, Nat. Med. 4: 679-684;			
		Schulz, T.F. et al. (1992) Conserved Structural Features in the Interaction between Retroviral Surface and Transmembrane Glycoproteins? AIDS Res. Hum. Retrovirus 8(9): 1571-1580;			
		Stamatatos, L. et al. (1994) Differential Regulation of Cellular Tropism and Sensitivity to Soluble CD4 Neutralization by the Envelope gp120 of Human Immunodeficiency Virus Type 1, J. Virol. 68: 4973-4979; and			
		Trkola, A. et al. (1996) Human Monoclonal Antibody 2G12 Defines a Distinctive Neutralization Epitope on the gp120 Glycoprotein of Human Immunodeficiency Virus Type 1. J. Virol. 70: 1100-1108.			
EXAMINER			DATE CONSIDERED		
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.					

Form PTO-1449

U.S. Department of Commerce
Patent and Trademark OfficeAtty. Docket No.
59331-E
JPW/AJD/BWSLSerial No.
10/780,993INFORMATION DISCLOSURE CITATION
(Use several sheets if necessary)Applicant(s)
James M. Binley et al.Filing Date
February 18, 2004

Art Unit

U.S. PATENT DOCUMENTS

Examiner Initials	Exh No.	Document Number							Date	Name	Class	Subclass	Filing Date If Appropriate
	1	5	4	7	4	9	1	4	12/12/95	Spaete			
	2	6	1	7	1	5	9	6	01/09/01	Earl et al.			
		60	1	4	1	1	6	8		Binley et al.			06/25/99
	3	09	3	4	0	9	9	2		Binley et al.			06/25/99
	4	2 0 0 3 / 0 0 5 2 8 3 9							03/20/03	Binley et al.			
	5	10	1	1	7	3	6	6		Binley et al.			04/05/02
		60	3	7	0	4	1	0		Binley et al.			04/05/02
	6	60	3	1	7	9	0	9		Binley et al.			09/06/01
	7	Claims Filed in 6 0 / 3 1 7 , 7 6 4								Binley et al.			09/06/01
	8	60	3	1	7	9	1	0		Moore et al.			09/06/01
	9	Claims Filed in 6 0 / 3 1 7 , 7 7 5								Moore et al.			09/06/01
	10	60	3	7	0	2	6	4					04/05/02
	11	Pending Claims in 1 0 / 4 8 9 , 0 4 0								Moore et al.			03/05/04
	12	60	5	8	0	2	2	9		Schuelke et al.			06/15/04

FOREIGN PATENT DOCUMENTS

		Document Number							Date	Country	Class	Subclass	Translation	
													Yes	No
	13	0	1	0	0	6	4	8	01/04/01	PCT				
	14	03	0	2	2	8	6	9	03/20/03	PCT				
	15	03	0	8	7	7	5	7	10/23/03	PCT				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	16	Cao, J., et al. (1993) Effects of Amino Acid Changes in the Extracellular Domain of the Human Immunodeficiency Virus Type 1 gp41 Envelope Glycoprotein, <u>J. Virol.</u> 67(5):2747-2755; and											
	17	Letvin, N.L., 1998, Progress in the Development of an HIV-1 Vaccine, <u>Science</u> 280:1875-1880.											

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449 U.S. Department of Commerce Patent and Trademark Office INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Application Number</td> <td>10/780,993</td> </tr> <tr> <td>Filing Date</td> <td>February 18, 2004</td> </tr> <tr> <td>First Named Inventor</td> <td>James M. Binley et al.</td> </tr> <tr> <td>Art Unit</td> <td></td> </tr> <tr> <td>Examiner Name</td> <td></td> </tr> <tr> <td>Attorney Docket No.</td> <td>59331-AA</td> </tr> </table>	Application Number	10/780,993	Filing Date	February 18, 2004	First Named Inventor	James M. Binley et al.	Art Unit		Examiner Name		Attorney Docket No.	59331-AA
Application Number	10/780,993												
Filing Date	February 18, 2004												
First Named Inventor	James M. Binley et al.												
Art Unit													
Examiner Name													
Attorney Docket No.	59331-AA												

U.S. PATENT DOCUMENTS				
Examiner Initials [*]	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		U.S. 2006-0094049	05-04-2006	
		U.S. 2006-0051373	03-09-2006	

FOREIGN PATENT DOCUMENTS					
Examiner Initials [*]	Cite No. ¹	Foreign Patent Document Country Code ⁴ Number ⁴ Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T ⁶
		WO 2006/002079	01-05-2006		

EXAMINER SIGNATURE	DATE CONSIDERED
--------------------	-----------------

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds of Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.

Applicants: James M. Binley et al.
Serial No.: 10/780,993
Filed: February 18, 2004
Exhibit A

Form PTO-1449		U.S. Department of Commerce		Application Number	10/780,993
		Patent and Trademark Office		Filing Date	February 18, 2004
				First Named Inventor	James M. Binley et al.
				Art Unit	
				Examiner Name	
				Attorney Docket No.	59331-AA
INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)					
NON PATENT LITERATURE DOCUMENTS					
Examiner Initials [*]	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.			T ²
		Binley, J.M. et al. (2002) "Enhancing the proteolytic maturation of human immunodeficiency virus type 1 envelope glycoproteins." J. of Virology, Vol 76 No. 6 pages 2606-2616			
		Chen, S. (1993) "Mutational analysis of the leucine zipper-like motif of the human immunodeficiency virus type 1 envelope transmembrane glycoprotein" J. of Virology, June 1993, Vol. 67, No. 6, p. 3615-3619			
		Creson J. (1999) "The Mode and Duration of Anti-CD28 Costimulation Determine Resistance to Infection by Macrophage-Tropic Strains of Human Immunodeficiency Virus Type 1 in Vitro" Journal of Virology, Nov. 1999, Vol. 73, No. 11, p. 9337-9347			
		Ditzel H J et al. (1997) "Mapping the protein surface of human immunodeficiency virus type 1 gp 120 using human monoclonal antibodies from phage display libraries" J. of Molecular Biology, Vol. 267 No. 3, pages 684-695			
		Haynes, B.F. (1996) "Update on the Issues of HIV Vaccine Development" Ann. Med. 28:39-41			
		Nakashe, J. et al., (2001) "Rectal immunization with antigen-containing microspheres induces stronger Th2 responses than oral immunization: a new method for vaccination" Vaccine, Butterworth Scientific Guildford, GB, Vol. 20, no. 3-4, pages 377-384			
		Parker, Carole, et al. (2001) "Fine Definition of the Epitope on the gp41 glycoprotein of human immunodeficiency virus type 1 for the neutralizing monoclonal antibody 2F5" J. of Virol. Vol. 75, No. 22, pages 10906-10911			
		Sanders R. et al., (2002) "Stabilization of the soluble, cleaved, trimeric form of the envelope glycoprotein complex of human immunodeficiency virus type 1." Journal of Virology, Vol. 76, No. 17, p. 8875-8889			
		Sanders R. (2000) "Variable-Loop-Deleted Variants of the Human Immunodeficiency Virus Type 1 Envelope Glycoprotein Can Be Stabilized by an Intermolecular Disulfide Bond between the gp120 and gp41 Subunits" Journal of Virology, June 2000, Vol. 74, No. 11, p. 5091-5100			
		Schulke, Norber et al. (2002) "Oligomeric and conformational properties of a proteolytically mature, disulfide-stabilized human immunodeficiency virus type 1 gp140 envelope glycoprotein." J. of Virology, Vol 76 No. 15 pages 7760-7776			
EXAMINER SIGNATURE		DATE CONSIDERED			
<p>[*]EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²Applicant is to place a checkmark here if English language Translation is attached.</p>					

Applicants: James M. Binley et al.
Serial No.: 10/780,993
Filed: February 18, 2004
Exhibit A

Form PTO-1449		U.S. Department of Commerce		Application Number	10/780,993
		Patent and Trademark Office		Filing Date	February 18, 2004
				First Named Inventor	James M. Binley et al.
				Art Unit	
				Examiner Name	
				Attorney Docket No.	59331-AA
INFORMATION DISCLOSURE CITATION					
(Use several sheets if necessary)					
NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No.¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.			T²
		Ishikawa et al. (1998) "Rapid Formation Of The Immune Complexes On Solid Phase In The Immune Complex Transfer Enzyme Immunoassays For HIV-1 P24 Antigen And Antibody IgGs To HIV-1" <i>J. of Clinical Laboratory Analysis</i> , Vol. 12 pgs 227-237			
		Josephson, et al. (1999) "High-Efficiency Intracellular Magnetic Labeling With Novel Superparamagnetic-Tat Peptide Conjugates" <i>Bioconjugate Chemistry</i> , Vol. 10 pages 186-191			
		Rickman et al. (1991) "Use of Adjuvant Containing Mycobacterial Cell Wall Skeleton, Monophosphoryl Lipid A, And Squalane In Malaria Circumsporozoite Protein Vaccine" <i>The Lancet</i> , Vol. 337, pgs 998-1001			
EXAMINER SIGNATURE		DATE CONSIDERED			
<p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²Applicant is to place a checkmark here if English language Translation is attached.</p>					